

A HITHERTO UNKNOWN DOCUMENT ON THE FIRST PROPOSAL TO INTRODUCE PIKEPERCH *STIZOSTEDION LUCIOPERCA* (PERCIDAE) IN FRANCE.

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RÉSUMÉ. - Un document inédit sur la première proposition d'introduction du sandre *Stizostedion lucioperca* (Percidae) en France.

L'article présente un document inédit et inconnu concernant les premières propositions historiques d'introduction en France du sandre, *Stizostedion lucioperca*, dans la première moitié du 19^{ème} siècle. Les circonstances de la première tentative d'introduction lors de la mission d'Achille Valenciennes sont également discutées.

Key-words. - Percidae, *Stizostedion lucioperca*, France, Fish introduction, History.

The first catch of pikeperch *Stizostedion lucioperca* (L., 1758) in France is dated 1912 (Goubier, 1975), in the canal between the Marne and the Rhine. Prior to this date, pikeperch had already been caught in the Rhine in 1888 (Armengaud, 1962 in Allardi and Keith, 1991), an event that is generally viewed as the first instance of the species in this part of Europe.

The first efforts to acclimatise this species in France are linked to the German mission of Achille Valenciennes. In 1851 the French government commissioned this naturalist to conduct investigations in collaboration with German zoologists over a period of several months. Their aim was to « find and bring back (to France) several large fresh-water fish ». The pikeperch is the first species listed in the mission's report because they considered that of all the German fresh-water fish listed, it had the most to offer France at the time.

Valenciennes' mission provides a good illustration both of the circumstances in which the acclimatisation was prepared for, and the interest aroused by the idea of introducing new species in

France and Germany. Alexander Humboldt⁽¹⁾ recognised the scientific and economic impact of extending the European habitat of the pikeperch and not only agreed to assist Valenciennes' mission in Germany with his know-how, but also backed it financially. The French naturalist was even received in person by the King of Prussia⁽²⁾. Upon request by Valenciennes, investigations into the possibility of transporting live pikeperch were conducted in German zoological gardens: « Lichtenstein⁽³⁾ conducted experiments to determine how long pikeperch can survive without a change of water. I conducted the same studies concurrently in the gardens of the school of veterinary medicine in Berlin. Having established that pikeperch easily survive for a period of 45-50 hours in the same water, I prepared a transportation system consisting of ten barrels ». The Direction of the Prussian and the Inspectorate of the Franco-Belgian railways issued special directives facilitating the transport (the train stopped from time to time to change the water). Valenciennes succeeded in bringing eight live pikeperch to Paris, which were then released in the Seine. The mission was declared a success, Valenciennes

(1) The close friendship of Valenciennes and Humboldt has been the subject of some publications (Theodorides, 1964).

(2) To return the favour Valenciennes established a list of French fresh-water species, which met with lively interest of both German naturalists and the administration.

(3) In 1801, Heinrich Lichtenstein (1780-1857), Germany naturalist, went to Southern Africa and stayed there for five years. He brought back a considerable naturalist collection and published *Reisen in südlichen Africa*. In Berlin he occupied the chair of natural history in 1811, and in 1819 he was director of the Museum of Zoology which, through his efforts, rapidly became one of the most important in Europe. He also collaborated with numerous French naturalists. He lent many collections to Cuvier and Valenciennes, including those of Pallas and Ehrenberg and recommended many naturalists to his French colleagues, among them Baron le Krassow, curator of the Museum of Natural History in Moscow. He received many French naturalists in Berlin. Lucien Bonaparte greatly appreciated his welcome (Bonaparte, 1856).

himself wrote: « This is the first time that pikeperch can be found on this side of the Rhine; for the first time, living specimens of this species may now be viewed in Paris ... ». Although this introduction was a success, it was not followed up. The same can be said of other attempts to introduce pikeperch during the nineteenth century (Le Fort, 1909)⁽⁴⁾.

Cuvier's archive, at present part of the manuscript collection of the library of the Institut de France, contains several hundred letters dealing with preparatory work for *Histoire Naturelle des Poissons*. The documents dealing with this work have until now been studied only in fragmentary fashion (Bauchot *et al.*, 1990). Among the documents that have never been investigated, nor published, is the correspondence between Cuvier and the renowned politician François de Bonnay⁽⁵⁾.

(4) For example, the Bulletin d'Acclimatation de France mentions that « M. Millet presented to the Assemblée pikeperch which he had introduced and acclimatised in the fresh waters of the Aisne des Ardennes (...). On the same occasion he presented a carafe containing a large number of young pikeperch recently hatched from eggs laid by adult fish which he had acclimatised in France ». In 1874 M. Blanchère mentions an unsuccessful attempt to introduce pikeperch. In the session of April 12, 1878, M. Millet again pleaded in favour of the pikeperch and pointed out the advantages of M. Lefevre's introduction of the fish in the Aisne ». In 1885 M. Maurice Richard thanked the Société d'Acclimatation for sending to him the young pikeperch offered to the Société by M. Max von dem Bornn. The fish, which reached him in good condition, were placed in a pond in the Millemonts domain (Seine et Oise). But in spite of these efforts the pikeperch was never mentioned in 19th century general French treatises on pisciculture (Goubier, 1975). The fish is presented in the instructions of the Société d'Acclimatation de France as a species to be acclimatised (Dupuis, 1862).

(5) Bonnay (Marquis François de) (1750-1825), officer in a dragoon regiment, poet, monarchist, deputy at the Assemblée Nationale in 1789 and 1790 and exile. Appointed *Ministre de France* at Copenhagen under Louis XVIII, he later led a diplomatic mission to Hamburg before becoming French Ambassador in Berlin. On his return to France he was nominated *pair de France*, *lieutenant général*, Minister of State and Governor of

The letter dated July 1, 1820, is a reply to Cuvier's request for fish to be sent from the Baltic and the Mecklenburg Coast. François de Bonnay in turn addressed a plea to Heinrich Lichtenstein (1780-1857) to fulfil this request. In the last part of the letter, de Bonnay proposes to organise transportation of pikeperch for their introduction in France. He expresses the opinion that it should be possible to transport live adults and to catch and transport fry, an opinion he bases on his discussion with Lichtenstein. François de Bonnay returned to France in 1820 and was probably unable to implement his project.

This letter is a particularly valuable document for the history of the European pikeperch population. It represents the oldest proposal known in French zoological historiography to introduce this species. It shows that the first proposals to introduce the pikeperch are not linked to the mission of Valenciennes, and in fact precede it by over thirty years. De Bonnay's proposal was never realised. On the one hand, de Bonnay's stay in Germany came to an end in that same year but on the other, Cuvier's opinion was decisive, as he was sceptical of the possibility of transporting pikeperch to France. He wrote: « its flesh is very pleasant to the taste » but « it has an easier life than the perch. In captivity, it eats nothing and is even difficult to keep in these conditions; it is therefore difficult to transport them live. It is for this reason that no one has succeeded in breeding this fish in France, although it would be a new and agreeable addition to our tables. It is however worth the effort to introduce them; our climate would not be hostile as these fish live at more northern and southern latitudes ». We must add that these words were written prior to the construction of the railway line linking France and Germany and even the construction of the Kiel canal, and for these reasons transportation from the other Baltic ports (Koenigsberg, Dantzig and Stettin) to French ports would have taken several days.

Fontainebleau. He took a keen interest in natural history collections and asked Georges Cuvier to help him complete the herbal of fresh-water seaweeds and the ferns of French Guyana and the Antilles. He sent fish to Cuvier from the Danube, Bavaria and Austria and played a role in sending fish from Pomerania and the Baltic (in his second letter he lists 15 species).